

Air Currents



The New Patient Tower at Miami Valley Hospital

By Angela Deere, RN, BSN, CCRN, EMT-P Program Educator

Miami Valley Hospital's new 12-story patient tower is officially open. It marks a new era for the hospital that is celebrating 120 years in Dayton – at the same location. Now visitors coming to the hospital will see a very different MVH. The new tower is constructed mostly of glass and is surrounded by a park-like setting.

The building which was dedicated on Dec. 12 is home to the Heart and Vascular Center and Orthopedic Joint and Spine Center. Patients were admitted to the new space starting Dec. 28.

continued on back page



Winter Helipad Maintenance and Safety

By Marcia Roemer, RN, EMT-P

With the arrival of winter weather, close attention needs to be directed to the maintenance of ground and rooftop helipads, which can become extremely dangerous when coated with ice and snow.

Like traditional airport runways, helipads require regulations to assure safety and security of the aircraft, crew and their ground-based facilities. Federal aviation regulations on helicopter landing zones are not as intricate as their fixed-wing counterparts, but they are important.

To insure maximum safety in and around the landing area including the sidewalks and entrance ramps to the helipad, snow and ice should be removed prior to the helicopter's arrival whenever possible.

When aircrafts attempt to land, swirling snow raised by rotor wash can cause the pilot to lose sight of the intended landing point, as well as hide objects that need to be avoided. In addition, rotor wash can propel pieces of ice and sections of snow with dangerous velocity, likely injuring those nearby or causing damage to vehicles in the vicinity.

Snow and ice should be removed sufficiently and not present an obstructive hazard to the tail or main rotor, as well as eliminate any possibility of flying debris.

Helipad Snow and Ice Removal Strategies

- All snow and ice removal equipment should be checked to make sure it is fully operational well before the onset of colder weather.
- Staying ahead of the snow and ice with early mechanical removal minimizes chemical usage, which is ultimately better for aircraft, pavement surfaces, electrical lighting systems, and the environment.

- Snow blowers, as well as mowers fitted with blowers, blades or sweeper attachments, and a variety of shovels can be very effective for the initial removal of snow on the helipad, sidewalks and all entranceways to the helipad and medical facility.
- Materials such as sand and salt should not be used on the helipad.
 - While sodium chloride (rock salt) is the most common chemical used in snow and ice removal compounds, it can be extremely corrosive and damaging. In addition, because of the size of rock salt, a helicopter's rotor wash could cause the pellets to become projectiles which could produce serious injury or property damage.
- Locally, urea is widely used as a principal chemical deicer; it can penetrate ice at temperatures as low as 17° F, and it has proven to be less corrosive than salt on aircraft metals and pavement.
- While more costly, one of the most effective and noncorrosive chemical compounds used for deicing is sodium acetate. This compound is popular primarily because it does not contain chlorides that can cause corrosion. Additionally:
 - Sodium acetate is effective at much lower temperatures, 0° F (-18° C), than sodium chloride and urea, which lose their effect below 20° F (-7° C)
 - It gives off heat as it dissolves, melting ice faster than common deicers
 - It works longer, requiring fewer applications

Each facility should take into account the most practical and effective methods needed for proper maintenance of their helipad during winter months, which will help assure absolute landing zone safety.



The GlideScope® Ranger: CareFlight's Newest Airway Adjunct

By Andrew C. Hawk, MD, Medical Director, CareFlight



Andy Hawk, MD

Earlier this summer, CareFlight expanded its airway adjuncts by adding the GlideScope® Ranger. This video laryngoscope is now stocked on all CareFlight helicopters and MICUs.

Basically, the "Ranger" is a laryngoscope with a video camera fixed near the end of the curved blade. The camera is connected to a portable video screen by a cable attached at the handle end of the laryngoscope. Instead of visualizing the glottic opening by direct sight, the intubator watches the video screen and passes the endotracheal tube.

Some believe video laryngoscopy (VL) will ultimately replace "the old fashioned" direct laryngoscopy (DL). In my opinion, that time has not arrived yet. In many situations, VL may allow for better visualization of the glottic opening as compared to DL. But the technique of actually passing the endotracheal tube via the video screen can be challenging. In fact, a special endotracheal tube stylet comes with the GlideScope® Ranger system.

In addition, VL is at risk for oropharynx secretions et al. blocking the camera eye. This

leads to non-visualization of the glottic opening on the video screen. For the "Ranger," the drier the oropharynx the better!

As mentioned in the title of this article, the GlideScope® Ranger is an airway adjunct. It can be a valuable intubating tool, especially when confronted with difficulty in glottic visualization. But it does have limitations as discussed that need to be appreciated.

To effectively address the spectrum of successful intubation, the CareFlight crews will continue to utilize both direct laryngoscopy and video laryngoscopy. The patient's presentation, the clinical situation, and the individual care giver will dictate which intubating adjunct is used.

Overall, the "Ranger" has been a successful addition of video laryngoscopy to the CareFlight program. It has added an extra dimension when it comes to intubation.

For more information on the GlideScope® Ranger, visit www.verathon.com.

Outreach Update

By Mary Lou Kyne, RN, Outreach Coordinator

EMS Night at Kil-Kare Raceway

Each year Kil-Kare Raceway honors the emergency medical service personnel by hosting a competition cot race. This event presents \$500 to the winner of the race. CareFlight Air and Mobile Services makes it an annual tradition to participate in the cot race event as do many other local EMS agencies. Spring Valley Township Volunteer Fire Department won the event in 2010 and sticking with tradition generously donated the money to CareFlight Air and Mobile Services to fund the Christmas Family Project. We would like to once again thank Spring Valley Township Volunteer Fire Department for their continued generosity and support.

On The Road to Logan County

This event was held in November at the High Point Career Center in Bellefontaine, Ohio. Approximately 70 people attended and earned 6.25 continuing education credits. On the Road to Logan County was successful due to the joint efforts of West Liberty EMS, Logan County EMA, Dayton EMS, Good Samaritan Dayton and Miami Valley Hospital trauma program, neuroscience and cardiac services.

Save the Dates

Jan. 29, 2011 – Air Medical Safety EMS CEU Joint Conference

Location: Southern State College Auditorium
100 Hobart Drive
Hillsboro, Ohio 45133

Cost: FREE

CEUs applicable to EMS, Nursing and Air Medical Safety

Presented by: CareFlight Air and Mobile Services, U.C. Health Air Care and Mobile Care, and MedFlight of Ohio

Feb. 19, 2011 – On The Road to Auglaize County*

April 16, 2011 – On The Road to Clinton County*

**Registration details available at mvh.org/CareFlight*

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The New Patient Tower (continued)

The patient tower becomes the new entrance into the hospital. From the spacious lobby, visitors are able to access all other areas of the hospital. The lobby includes a coffee bistro and a Health Information Center.

One of the main benefits of the new patient tower is that it allows MVH to consolidate all its cardiac services – inpatient and outpatient – in one location. Previously patients had to travel to different parts of the hospital to undergo testing or surgery.

All outpatient cardiac testing is done on the tower's main level. Heart and vascular procedures are on the second floor which includes five catheterization labs and two surgical suites devoted exclusively to heart surgery. Three floors in the new patient tower house heart patients and two are dedicated to orthopedic care. All 178 rooms are private to promote a more restful and healthy atmosphere.

Orthopedic patients will be cared for on the eight and ninth floors of the patient tower. Staff on the

eight floor will care for patients requiring a wide range of orthopedic treatment. The ninth floor is designed to treat spinal illness and trauma. (Any condition involving damage to the spinal cord treated by neurological specialists in another unit at MVH). The orthopedic center will also have its own therapy satellite conveniently located on the eighth floor.

The new patient tower was purposefully designed to be environmentally friendly. One element included in the design was the installation of two green roofs. In addition to aesthetics and their connection to the natural environment, green roofs help absorb rainwater, which reduces storm run-off; provide insulation, which helps to reduce heating and air-conditioning costs; lowers air temperatures; and green roofs aid in better acoustics. The building is on track to earn the prestigious Leadership in Energy and Environmental Design (LEED) certification this spring. LEED certification is awarded by the United States Green Building Council.